

MOCHALOVA, A.V.

Minutes of Sessions of the Moscow Therapeutic Society. Terap.
arkh.25 no.4:94-95 J1-4g '53. (MLRA 7:2)
(Stomach--Foreign bodies) (Cardiovascular system--Diseases)

MOCHALOVA, A. V., kandidat meditsinskikh nauk; SUDAKOVA, S. A.,
kandidat meditsinskikh nauk.

Therapeutic use of a new Russian preparation digipuren. Sov.
med. 20 no.4:54-57 Ap '56. (MLRA 9:8)

1. Iz 3-y terapeuticheskoy kafedry (zaveduyushchiy zasluzhennyj
deyatel' nauki professor I. A. Kassirskiy) Tsentral'nogo instituta
i usovershenstvovaniya vrachey i Vsesoyuznogo nauchno-issledovatel'-
skogo instituta lekarstvennykh i aromaticheskikh rastenij
(zaveduyushchiy otdelom farmakologii --professor A. D. Turova).

(DIGITALIS, therapeutic use,
total extract digipuren (Rus))

MOCHALOVA, E.F.

Preparing thin soil sections with undisturbed structure. Pochvovedenie no.10:98-100 O '56.
(MLRA 10:1)

1. Pochvennyy institut imeni V.V. Dokuchayeva Akademii nauk SSSR.
(Soils--Analysis)

OSTROVNIKHOV, G.Ye.; GASHPYAN, L.N.; GASPARYAN, S.A.; MULIKOV, V.

Comparative experimental evaluation of arterial resuscitation by
Intra-arterial infusion and isolated perfusion of pelvic organs.
Vop. onk. 11 no. 1:62-67 '67.

I. Iz kafeidry operativnoy kirurgii i topografiicheskoy anatomii
(zav. - prof. A.M. Strelkov) i anestezii i resuscitatsii
(zav. - prof. L.S. Terzianian) i ego Moscoweskogo universiteta im. V.I. Me-
dvedtinskogo instituta imeni N.I. Pirogova.

SIROTININA, I.R.; MOCHALOVA, G.I.; PASTIKOVA, T.I.; PONOMAREVA, P.I.

Sensitivity of local strains of the diphtheria bacillus to
antibiotics. Trudy Tom NIIVS 12:130-131 '60 (MIRA 16:11)

1. Nauchnyy studencheskiy kruzhok kafedry mikrobiologii
Tomskogo meditsinskogo instituta.

*

FRIDMAN, L.A.; FRANTSEVICH, V.M.; MOCHALOVA, G.L.

Metal probe magnetometer with self-adjustment by a magnetic amplifier.
Fiz. met. i metalloved. 16 no.6:921-923 D '63. (MIRA 17:2)

1. Institut fiziki metallov AN SSSR.

KANAVETS, P.I.; MELENT'YEV, P.N.; YENIK, G.I.; IVLEVA, A.S.;
LAZOVSKIY, I.M.; GRYAZNOV, N.S.; MOCHALOVA, G.V.; KORENSKIY, V.I.

Preliminary granulating of coal charges with rolling in mazut.
Koks i khim. no.8:10-14 '63. (MIRA 16:9)

1. Institut goryuchikh iskopayemykh AN SSSR (for Kanavets,
Meleent'yev, Yenik, Ivleva), 2. Vostochnyy uglekhimicheskiy
institut (for Lazovskiy, Gryaznov, Mochalova, Korenskiy).
(Coal preparation)

MOCHALOVA, L.A.

3

✓ Resistance of the gaseous phase in the absorption processes of carbon dioxide by alkaline solutions. M. Kh. Kishinevskii and L. A. Mochalova. *Uchenye Zapiski Akademii Nauk Ural'skogo Kraia, Zhur. Khim.*, 1954, No. 40943.—In order to test the equations for mass transfer in the gaseous phase previously derived (cf. *C. & I.* 49, 1294c) the rate of absorption of CO₂ by alk. solns. of KOH and NaOH was studied. The expts. were made in the region of high turbulence of the liquid phase (speed of stirring 1700 and 2800 r.p.m.) in order to intensify the transfer of matter in the liquid phase to a point where the resistance of the gaseous phase would attain significant value. In the equation for the resistance mechanism of the gaseous phase $\tau_g = \delta_g P_c (1 - xK_{\infty})$ the value τ_g/P_c is in linear relation to K_{∞} . The values of τ_g/P_c and K_{∞} calc'd. from exptl. data for the absorption of CO₂ by KOH and NaOH are in good agreement with the equation.
M. Hoch

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134820013-8

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134820013-8"

MOCHALOVA, L. A.

AID P - 1575

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 5/21

Authors : Mochalova, L. A. and Kishinevskiy, M. Kh.

Title : Kinetics of absorption by bubbling

Periodical : Zhur. prikl. zhur., 28, no.1, 30-39, 1955

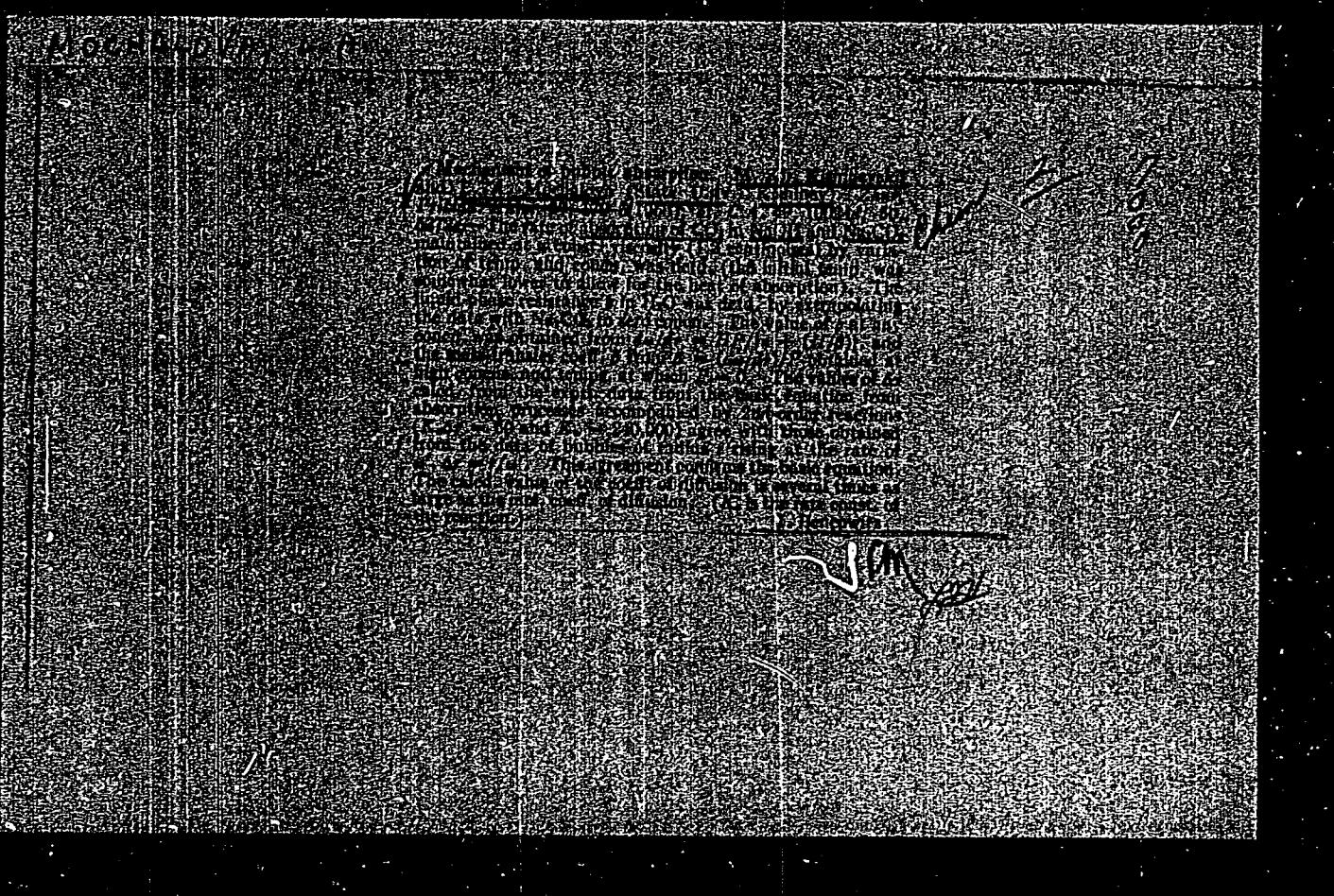
Abstract : The following systems were studied: CO₂ -- aqueous solutions of N₂CO₃; CO₂ -- aqueous solutions of NaOH; CO₂ -- aqueous solutions of monoethanolamine; and SO₂ -- aqueous solutions of Na₂CO₃. Equations applicable to these systems are given. One diagram, 9 tables, 12 references (7 Russian: 1948-51)

Institution: Laboratory of Physical Chemistry of the Kishinev State University

Submitted : Ap 14, 1955

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CIA-RDP86-00513R001134820013-8

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134820013-8"

MOCHALOVA, L.A.; KISHINEVSKIY, M.Kh.

Transfer of matter during the absorption by the bubbling method.
Zhur. prikl. khim. 31 no.7:1013-1018 J1 '58. (MIRA 11:9)

1. Laboratoriya fizicheskoy khimii Kishinevskogo gosudarstvennogo
universiteta.

(Absorption) (Mass transfer)

5(1)

SOV/80-32-4-13/47

AUTHORS: Mochalova, L.A., Kishinevskiy, M.Kh.**TITLE:** On the Calculation of the Height of Towers for the Chemical Interaction of a Gas With a Liquid (O raschëte vysoty apparatov dlya khimicheskogo vzaimodeystviya gaza s zhidkost'yu)**PERIODICAL:** Zhurnal prikladnoy khimii. 1959, Vol 32, Nr 4, pp 785-789 (USSR)**ABSTRACT:** Methods for designing absorption apparatus, employed in chemical technology for gas-liquid interactions, have not thus far been developed. The authors propose a way for calculating the height of an apparatus sufficient for extracting an absorbed component from the gaseous mixture to a prescribed degree and for accomplishing the chemical transformation of the liquid phase to a certain percentage. The proposed method is based on the equation of absorption kinetics with allowances for chemical reactions. Only one of the most often occurring cases is considered, when the absorption process is accompanied with an irreversible reaction of the second order. The authors derive Formula 6 for computing the height of packing layer for the case of packed columns and Formula 13 for computing the consumption of liquid per one sq m of the column cross-section for the case of bubble

Card 1/3

SOV/80-32-4-13/47

On the Calculation of the Height of Layers for the Chemical Interaction
of a Gas With a Liquid

plate columns. These two types of columns are mostly used types of the absorption apparatus. The practical application of the formulae obtained is possible when the values of mass-transfer coefficients in the liquid and gaseous phases are known (referred to the unit of the apparatus volume in the first case, or to 1 sq m of the plate area in the latter), as well as the period of the renewal of the surface layer. Formulae 6 and 13 were experimentally checked under laboratory conditions with the following systems: 1) CO₂ - aqueous-ammonia solutions, and 2) CO₂ - aqueous solutions of NaOH, and proved to yield satisfactory results.

Card 2/3

There are 4 Soviet references.

SOV/80-32-4-13/47

On the Calculation of the Height of Towers for the Chemical Interaction
of a Gas With a Liquid

ASSOCIATION: Laboratoriya fizicheskoy khimii Kishinevskogo gosuniversiteta
(Laboratory of Physical Chemistry of the Kishinev State Uni-
versity)

SUBMITTED: April 21, 1958.

Card 5/3

5(4)

SCV/80-32-5-15/52

AUTHORS: Kishinevskiy, M.Kh., Mochalova, L.A.

TITLE: On Surface Resistance in Absorption Processes

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 5, pp 1016-1021 (USSR)

ABSTRACT: In recent years several works on the kinetics of absorption complicated by chemical reactions and on the kinetics of simple absorption have been published. Contradictions in the experimental material of Pozin and Kopylev [Ref 3] show the necessity of calculating the surface resistance in absorption processes. It is known that the coefficient of mass transfer found in the absorption rate of CO₂ in NaOH solution is considerably less than the coefficient found in the experiments with ammonia and moistening by the air. The dependence of the coefficient of mass transfer in the gaseous phase per 1 m² of the plate on the gas speed in the full cross section of the column is shown in a diagram. The contradictions of [Ref 3] may be explained that in the case of NH₃ a value near to k_g, the coefficient of the gaseous phase, was found due to the high solubility of ammonia; in the second case a value near to k_l, which is determined by the average

Card 1/2

On Surface Resistance in Absorption Processes

SOV/80-32-5-15/52

rate of the thermal motion of molecules, has been found. The authors state that the purpose of the present article is to draw the attention to the mentioned problem, not to give a final solution. There are: 1 graph, 1 table and 8 references, 4 of which are Soviet and 4 English.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

SUBMITTED: May 12, 1958

Card 2/2

MOCHALOVA, L.A.; KISHINEVSKIY, M.Eh.

Study of absorption kinetics complicated by chemical
reactions on a sieve plate. Zhur.prikl.khim. 33 no.7:
1500-1506 Jl '60. (MIRA 13:7)

1. Laboratoriya fizicheskoy khimii Astrakhanskogo tekhnicheskogo
instituta rybnoy promyshlennosti i khozyaystva.
(Absorption) (Carbon dioxide)

KISHINEVSKIY, M.Kh.; MOCHALOVA, L.A.

Kinetics of extraction in a propeller mixer as studied in the system n-heptane - toluene - diethylene glycol. Zhur. prikl. khim. 33 no.9:2049-2056 S '60. (MIRA 13:10)

1. Laboratoriya fizicheskoy khimii Astrakhanskogo tekhnicheskogo instituta rybnoy promyshlennosti i khozyaystva.
(Extraction (Chemistry)) (Toluene) (Heptane)

KISHINEVSKIY, M.Kh.; MOCHALOVA, L.A.

Kinetics of the extraction of toluene by diethylene glycol from
a mixture of toluene with n-heptane in packed columns. Zbir.prikl.
khim. 33 no.10:2344-2349 0 '60. (MIRA 14:5)

1. Laboratoriya fizicheskoy khimii Astrakhanskogo tekhnicheskogo
instituta rybnoy promyshlennosti i khozyaystva.
(Toluene) (Diethylene glycol) (Extraction (Chemistry))

AKISHIN, P.A.; VILKOV, L.V.; MOCHALOVA, N.I.

Electron diffraction examination of the structure of molecules
with conjugated multiple bonds. Part 1: α -chloroacrolein and
methylglyoxal. Zhur.strukt.khim. 2 no.5:545-550 S-0 '61.
(MIRA 14:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Acrolein) (Glyoxal)

ALENT'YEV, Aleksandr Aleksandrovich, doktor tekhn. nauk, prof.
[deceased]; SKOROBOGAT'KO, Ye.P. [Skorobohat'ko, Ie.P.],
red.; KOSHALOVA, N.I., red.

[D.I.Mendeleev's periodic system of elements] Periodichna
systema elementiv D.I.Mendelieeva. Kyiv, Radians'ka
shkola, 1965. 159 p. (MIRA 18:9)

L 7881-66 EWT(m)/ETC/EWG(m)/EWP(j)/EWA(h)/EWA(1) DS/RM

ACC NR: AP5025015

SOURCE CODE: UR/0286/65/000/016/0079/0079

AUTHORS: Kozhevnikova, N. Ye.; Mochalova, O. A.; Pashkov, A. B.; Sapozhnikov,
V. B.; Slabkaya, L. D.

ORG: none

TITLE: A method for obtaining anion exchangers. Class 39, No. 173924 announced
by State Scientific Research Institute for Plastics (Gosudarstvennyy nauchno-
issledovatel'skiy institut plasticheskikh mass).

SOURCE: Byulleten' izobretений i tovarnykh znakov, no. 16, 1965, 79

TOPIC TAGS: anion exchanger, copolymer, styrene, divinylbenzene, plastic, ion
exchange, resin

ABSTRACT: This Author Certificate presents a method for obtaining anion ex-
changers on the basis of chloromethylated copolymer of styrene and divinylbenzene.
To increase the radiation stability of the anion exchangers, the copolymers are
treated with trialkylstilbines during heating.

SUB CODE: 07/ SUBM DATE: 22Jun64

nw
Card 1/1

UDC: 541.183.123.31678.746.22

TSVETKOVA, Ye.A.; KOTOVA, N.G.; TUNIK, B.A.; VENGRINOVICH, L.S.;
MOCHALOVA, R.M.

[Catalogue of publications received between July 1 and December 31 1961] Katalog publikatsii, postupivshikh s 1 iulia po 31 dekabria 1961 g. Moskva, No.6. [Longitudes and latitudes. Seismology. Gravimetry. General section] Dolgoty i shiroty. Seismologija. Gravimetrija. 14 p. Obshchi razdel. 7 p. [Rockets and satellites] Rakety i sputniki. 56 p, II. [Meteorology. XIV. Nuclear radiation] Meteorologija. XIV. IAdernaja radiatsija. 22 p. III. [Geomagnetism. IV. Aurora. V. Ionosphere. VI. Solar activity. VII. Cosmic rays] Geomagnetizm. IV. Polarnye sifanija. V. Ionosfera. VI. Sistemchnaja aktivnost'. VII. Kosmicheskie luchi. 62 p. IX. [Glaciology. X. Oceanography] Glaciologija. X. Okeanografija. 22 p. (NINA 16:6)

1. Mirovoy tsentr dannykh MGG B. 2. Nauchno-issledovatel'skiy institut aeroklimatologii (for all).
(Bibliography--Geophysics)

MICHALOVA, P.P. (Volgograd, ul. Gagarina, 9, kv.49)

Characteristics of intraorgan ramifications of an accessory hepatic artery derived from the left gastric artery in man. Ann. Anat., gist. i embr. 46 no.6:107-110 Je '64.

(MFA 18:3)

1. Kafedra normal'noy anatomi (zav. - zasluzhennyy deyatel' nauki prof. S.N. Kasatkin) Volgogradskogo meditsinskogo instituta i kafedra fiziologii i morfologii (zav. - prof. G.Ya. Priyma Volgogradskogo pedagogicheskogo instituta.

MOCHALOVA, P.P.

Form, variations and anomalies of the human liver. Uch. zap.
Volg. gos. ped. inst. no.16:138-145 '64.

Topography and morphology of intraorganic branches following
division of the hepatic artery proper into three and four
branches. Ibid.:146-153 (MIRA 19:1)

1. Kafedra fiziologii i morfologii Volgogradskogo gosudarst-
vennogo pedagogicheskogo instituta.

MOCHALOV, P.P.; KURBATOV, V.A.; GETSELEV, Z.N.; ASTANIN, S.D.; ZIMIN, L.S.;
SABUROV, V.V.

Induction furnace for heating slabs. TSvet. met. 38 no.4:83-86 Ap '65.

KOCHALOVA, T. I.: Master Agric Sci (Ligr) -- "Some biochemical and physiolog-
ical features of the potato in connection with its frost-resistance". Leningrad,
1959. 16 pp (Min Agric, Leningrad Agric Inst), 120 copies (E, No 1),
(1959, 109)

S/068/63/000/003/003/003
E071/E136

AUTHORS: Drabkina, I.Ye., Mochalova, T.I.,
Ovsyannikov, L.F., and Orechkin, D.B.

TITLE: Investigation of the composition of decalin produced
by hydrogenation of naphthalene on sulphur-resistant
catalysts

PERIODICAL: Koks i khimiya, no.3, 1963, 48-50

TEXT: The composition of commercial decalin produced by
hydrogenation of naphthalene over sulphur-resistant catalysts
(the type of catalyst not given) was investigated by repeated
fractional distillation on high efficiency laboratory columns and
the densities and refractive indices of the fractions measured.
The commercial product consisted of 98.8-99.6% of a mixture of
stereoisomers of decahydronaphthalene, in which the proportion of
trans isomer amounted to 90%. The product resulting from the
hydrogenation of technical naphthalene contained some low boiling
components other than decalin, the principle being ethylcyclic-
hexane. The formation of ethylcyclohexane is explained by the
destructive hydrogenation of benzo thiophene, present in technical
naphthalene. There are 4 tables and 1 figure. Card 1/1

MOCHALOVA, T.P.

LEV, P.D; MOCHALOVA, T.P.

Nephrectomy in a case of tuberculosis in the presence of axy-
loidosis of internal organs. Probl. tuberk., Moskva no.4:64-66
July-Aug. 1950. (CIML 20:1)

1. Of Moscow Oblast Scientific-Research Tuberculosis Institute
(Director -- Prof. F. V. Shebanov).

KOCHALOVA, T.P.

Scientific conference of the Moscow Province Institute for
Scientific Research on Tuberculosis. Probl. tub. no.3:81-82
Ky-Je '54. (MLRA 7:11)
(TUBERCULOSIS, prevention and control,
In Russia, conf.)

MOCHALOVA, T.P.

Combined therapy of urogenital tuberculosis. Urologia no.2:
15-17 Ap-Je '55. (MLRA 8:10)

1. Iz urologicheskogo otdeleniya (zav.--prof. A.B.Topchan)
Moskovskogo oblastnogo nauchno-issledovatel'skogo tuber-
kul'eznogo instituta (dir. N.P.Gurskiy, zam.dir. po nauchnoy
chasti--prof. D.D.Aseyev)

(TUBERCULOSIS, UROGENITAL, therapy,
combined techniques)

MOCHALOVA, T.P.

ASEYEV, D.D., professor; BERLIN, I.I., professor; VOZNESENSKIY, A.N., professor; SOROKIN, I.E., professor; UGRYUMOV, B.P., professor; TOPCHAN, A.B., professor; AGAPKIN, I.N., kandidat meditsinskikh nauk; AGRACHEV, G.I., kandidat meditsinskikh nauk; AL'TSHULER, N.S., kandidat meditsinskikh nauk; BEREZON, Ya.Ye., kandidat meditsinskikh nauk; ZORIN, Ye.N., kandidat meditsinskikh nauk; KOROVINA, Yu.P., kandidat meditsinskikh nauk; KOSITSKIY, G.I., kandidat meditsinskikh nauk; MANDEL'SHTAM, F.M., kandidat meditsinskikh nauk; MOCHALOVA, T.P., kandidat meditsinskikh nauk; OBLOGINA, Ye.Ya., kandidat meditsinskikh nauk; PATSKHVEROVA, A.G., kandidat meditsinskikh nauk; POKOTILOV, K.Ye., kandidat meditsinskikh nauk; ROZANOVA, M.D., kandidat meditsinskikh nauk; SAKHAROV, A.N., kandidat meditsinskikh nauk; YASHCHENKO, T.N., kandidat meditsinskikh nauk

"Tuberculosis"; handbook for physicians edited by Z.A.Lebedeva and N.A.Shmelev. Reviewed by D.D.Azeev and others. Probl.tub. 34 no.2: 76-80 Mr-Ap '56.

(MLR 9:8)

(TUBERCULOSIS) (LEBDEVА, Z.A.) (SHMELEV, N.A.)

Mochalova, T.P.
TOPCHAN, A.B., professor; MOCHALOVA, T.P., kandidat meditsinskikh nauk

Principles of treatment for urogenital tuberculosis. Urologia 21
no.4:18-25 0-D '56. (MIRA 10:2)

1. Iz urologicheskogo otdeleniya (zav. - prof. A.B.Topchan) Gosudar-
stvennogo nauchno-issledovatel'skogo instituta tuberkuleza (dir.
V.F. Chernyshev, zam. dir. po nauchnoy chasti-prof. D.D.Aseyev)
Ministerstva zdravookhraneniya RSFSR.
(TUBERCULOSIS, UROGENITAL, ther.
statist.)

MOCHALOVA, T. P.

TOPCHAN, A.B., professor; MOCHALOVA, T.P., kandidat meditsinskikh nauk

Late results of surgery for renal tuberculosis. Urologia 22 no.2:
18-21 Mr-Apr '57. (MLRA 10:7)

1. Iz urologicheskogo otdeleniya (zav. - prof. A.B.Topchan)
Gosudarstvennogo nauchno-issledovatel'skogo instituta tuberkuleza
Ministerstva zdravookhraneniya RSFSR (dir. V.F.Chernyshev).
(TUBERCULOSIS, RENAL, surg.
statist. follow-up)

MOCHALOVA, T.P.

MOCHALOVA, T.P., kandidat meditsinskikh nauk

Achievements in the treatment of tuberculosis of the urinary system.
Sov.med. 21 no.6:70-74 Je '57. (MLKA 10:9)

1. Iz urologicheskogo otdeleniya (zav. - prof. A.B.Topchan) Nauchno-
issledovatel'skogo instituta tuberkuleza Ministerstva zdravookhrane-
niya RSFSR (dir. V.F.Chernyshev)
(TUBERCULOSIS, UROGENITAL. ther.
during ther., follow-up)

EXCERPTA MEDICA Sec 14 Vol 13/6 Radiology June 59

1216. A CASE OF TOTAL CALCIFICATION OF KIDNEY (Russian text) - Mochalova T. P. - AZ. MED. ZH. 1957. 6 (95-96)

A case of total calcification of kidney discovered during routine radiological investigation for respiratory disease is described. The removed kidney weighed 420 g. and had the shape of a bag filled with putty-like gritty substance and separate pieces of chalk. This substance gave an abundant growth of *M. tuberculosis* (S)

TOPCHAN, A.B., prof.; MOCHALOVA, T.P., kand. med. nauk.

Late results of the treatment of genital tuberculosis. Urologiia 24
no.1:51-55 Ja-F '58.
(MIRA 12:1)

1. Iz urologicheskogo otdeleniya (zav.- prof. A.B. Topchan) Moskovskogo
nauchno-issledovatel'skogo tuberkuleznogo instituta (dir. - kand. med.
nauk V.F. Chernyshev) Ministerstva zdravookhraneniya RSFSR.
(TUBERCULOSIS, MALE GENITAL, ther.
antibiotics & chemother., remote results (Rus))

MOCHALOVA, T.P.

TOPCHAN, A.B., prof.; MOCHALOVA, T.P., kand.med.nauk

Classification of urogenital tuberculosis. Urologia, 21 no.1:40-42
Jn-F '58. (MIRA 11:3)

1. Iz urologicheskogo otdeleniya (zav.-prof. A.B.Topchan)
Gosudarstvennogo nauchno-issledovatel'skogo instituta tuberkuleza
(dir.-kandidat meditsinskikh nauk V.F.Chernyshev; zamestitel'
direktora po nauchnoi chasti-prof. D.D.Aseyev) Ministerstva
zdravookhraneniya RSFSR.
(TUBERCULOSIS, UROGENITAL
classif.)

MOCHALOVA, T.P., kand.med.nauk

Case of bilateral giant ureteropyonephrosis. Urologia 24 no.3:55-
56 My-Je '59. (MIRA 12:12)

1. Iz urologicheskogo otdeleniya (zav. - prof.A.B. Topchan) Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR.

(KIDNEY DISEASES, case reports,
uretero-pyonephrosis, bilateral giant (Rus))
(URETERS, dis.
same)

TOPCHAN, A.B., prof. (Moskva); MOCHALOVA, T.P., kand.med.nauk (Moskva)

Comments on critical objections to our classification of urogenital
tuberculosis. Urologia 24 no.4:57-59 Jl-Ag '59. (MIRA 12:12)
(TUBERCULOSIS, UROGENITAL)

TOPCHAN, A.B., prof. [deceased]; BRAUDE, V.I., kand.med.nauk;
MOCHALOVA, T.P., kand.med.nauk

Clinical and morphological characteristics of the form of renal
tuberculosis in patients treated with antibiotics and chemical
preparations. Probl.tub. no.5:50-56 '61. (MIRA 15:1)

J. Iz urologicheskogo otdeleniya (zav. - kand.med.nauk T.P.
Mochalova) Instituta tuberkuleza Ministerstva zdravookhraneinya
RSFSR (dir. - kand.med.nauk B.F. Chernyshev, zam. po nauchnoy
chasti - prof. D.D. Aseyev).
(KIDNEYS--TUBERCULOSIS) (ANTIBIOTICS) (CHEMOTHERAPY)

MOCHALOVA, T.P.; GRUND, V.D.; DANILOVA, N.K.; EFIMOVA, L.M.

Cycloserine therapy of urogenital tuberculosis. Probl.tub.
(MIRA 15:12)
no.7:67-71 '62.

1. Iz urologicheskogo otdeleniya (zav. - kandidat meditsinskikh
nauk T.P.Mochalova) Moskovskogo nauchno-issledovatel'skogo
instituta tuberkuleza (dir. - T.P.Mochalova, zam. dir. po
nauchnoy chasti - prof. D.D.Aseyev) Ministerstva zdravookhraneniya
RSFSR. (CYCLOSERINE) (GENITOURINARY ORGANS--TUBERCULOSIS)

TOPCHAN, A.B. [deceased], prof.; GRUND, V.D., kand.med.nauk;
MOCHALOVA, T.P., kand.med.nauk

Site of resection of the kidney in the overall compound treatment
of tuberculosis of the kidneys. Urologia 27 no.4:21-24 Jl-Ag '62.
(MIRA 15:11)

1. Iz urologicheskogo otdeleniya (zav. - prof. A.B. Topchan
[deceased]) Gosudarstvennogo nauchno-issledovatel'skogo instituta
tuberkuleza Ministerstva zdravookhraneniya RSFSR.
(KIDNEYS—TUBERCULOSIS) (KIDNEYS—SURGERY)

MOCHALOVA, T.P.

Reparative and reconstructive surgical interventions in
tuberculosis of the urinary tract. Urologia no.4:5-11 '63.
(MIRA 17:10)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta
tuberkuleza (dir.- kand. med. nauk T.P. Mochalova)
Ministerstva zdravookhraneniya RSFSR.

MOCHALOVA, T.P.; GAGANOVA, V.I., planochnitsa, Geroy Sotsialisticheskogo Truda; KOSAREVA, A.L., tkachikha, deputat Verkhovnogo Soveta RSFSR; LAZARENKO, Ye.S., tkachikha, deputat Verkhovnogo Soveta BSSR,

As told by the participants of the All-Union Conference on Industries and Construction and of the All-Union Conference of the Foremost Workers of Communist Labor. Tekst.prom. 23 no.8:4-11
(MIRA 16:9)
Ag '63.

1. Sekretar' partiynoy organizatsii Ivanovskogo melanzhevogo kombinata (for Mochalova). 2. Vyshnevolotskiy khlopchatobumazhnyy kombinat (for Gaganova). 3. Fabrika "Shuyskiy proletariy" (for Kosareva). 4. Minskiy tonkosukonnyy kombinat (for Lazarenko).
(Textile industry—Labor productivity)
(Communist Party of the Soviet Union—Party work)

MOCHALOVA, T.P., kand.med.nauk

Reconstructive surgical interventions in ureteral stenosis of
tuberculous origin. Probl. tub. 41 no.10:62-68 '63. (MIRA 17:1)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza
(dir. T.P.Mochalova, zamestritel' direktora po nauchnoy chasti -
prof. D.D.Aseyev) Ministerstva zdravookhraneniya RSFSR.

MAZINA, Ye.G.; SHOHRPTOV, M.F.; MOCHALOVA, T.I., kand.med.nauk

Congresses, conferences, scientific societies. Probl. tut. 4.
no.3.91-94 '64. (MIR 18-1)

MOCHALOVA, T.P.; MAZAYEV, F.N.

Significance of aortorenography in tuberculosis of the kidneys. Eksper.
khir. i anest. 9 no.1:34-36 Ju-F '64. (MIRA 17:12)

1. Urologicheskoye otdeleniye Moskovskogo nauchno-issledovatel'skogo
instituta tuberkuleza (dir. T.P.Mochalova).

BRAUDE, V.I. (Moskva, ul. Kropotkina, 15/10, kv.4); MOCHALOVA, T.P.

Sequelae of stenosis of the urinary tract appearing during the process of healing of renal tuberculosis. Vest. Khir. 92 no.5: 51-59 My '64. (MIRA 18:1)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza (direktor-kand. med. nauk T.P. Mochalova) Ministerstva zdravookhraneniya RSFSR.

MOCHALOVA, T.V.

USSR/Transcarpathia - Animal and Insect-Parasite Diseases
of Anthrax.

Ref. Jour. : Ref. Chuv. i. e., No. 3, 1953.
Author : Ganchev, S.A., Novikov, V.V., et al.
Title : Dynamics of Anthrax-Infected Herds in Soviet Transcarpathia
on Areas Designated for Forest Nurseries, 1950-1952.
Editor : Dr. Postovit, M.D. doc. n.s. et al. (Voroshilovgrad, U.S.S.R.)
XI, 61-87

Abstract : A comparison is made of the numbers of sheep and lambs with ticks at the entrance to barrows (by collecting in traps) of small numbers on 2 sectors (of 57-60 thousand hectares) of the Chorniy district of the Voroshilovgrad region where herds were destroyed by plowland belt in 1954 and where for the last 3 years they have not been collected. The average density of sheep population per hectare on the territory set aside for depletion in the

Card 4/2

MOCHALOVA, T. Ya.

"Development of the Root System of the Black Currant Related to Soil Conditions and Agrotechnics Prior to Planting." Cand Agr Sci, Fruit and Vegetable Inst imeni I. V. Michurin, Min Higher Education USSR, Michurinsk, 1955. (KL, No 14, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

CHEPIKOV, A.K., kand.sel'skokhoz.nauk; MOCHALOVA, T.Ya., kand.sel'skokhoz.nauk;
MOCHALOV, V.V., starshiy nauchnyy sotrudnik; ZHEVLAKOV, V.V.,
agronom-pitomnikovod

Is the bacterial crown gall harmful? Zashch. rast. ot vred. i
bol. 6 no.3:17-18 Mr '61. (MIRA 15:5)
(Crown-gall disease)

KAZACHEVSKIY, I.V.; CHERDYNTSEV, V.V.; KUZ'MINA, Ye.A.; SULERZHITSKIY, L.D.;
MOCHALOVA, V.F.; KYUREGYAN, T.N.

Isotope composition of uranium and thorium in the supergene zone.
Natural waters. Volcanic sediments. Geokhimiia no.11:1116-1121 N
'64. (MIRA 15:8)

1. Geological Institute, Academy of Sciences of the U.S.S.R., Moscow.

CHERDYNTSEV, V.V.; IBRAYEV, T.A.; MOCHALOVA, V.F.

Radioberyllium in fossil bones. Geokhimiia no.12:1240-1243 L 16.
(VTPR 18:2)

1. Geologicheskiy Institut AN SSSR, Moskva.

2017/61/PSS/01/015/001

AUTHOR: Evgeniya S. Mochalova, S. I. Syvatskaya, N. V. Tridshand, D. A. Shchukirov, N. P.

¹¹ The indicator-type measuring instrument operating on demand.

SOURCE: Avtomatika i priborostroyeniye, no. 4, 1964, 45-47

TOPIC TAGS: measuring instrument, digital measuring instrument

ABSTRACT. The blueprint of a 12-parameter (selected out of 600) measuring instrument is described. The instrument comprises two principal parts: (a) a switch panel with pushbuttons, relays, and a supply unit and (b) a digital instrument panel with digital converters and indicators. Three pulse generators with 100, 50, and 60 kc are provided. These characteristics are expected: time of digital conversion of one parameter - 10 msec; time of serving 12 channels - sec; maximum error - 1.1%. A "laboratory" hookup for two channels was stable

Card 1/2

L-215715-5

ACCESSION NR. LAF5001743

in operation. Orig. art. has 2 figures.

ASSOCIATION: Institut avtomatiki Goskomiteza po priboystroyeniyu Gosplanu
SSSR (Institute of Automation, State Committee on Measuring Instruments
Council of SSSR)

SUBMITTED- 000

ENCL- 000

SUB CODE: 100

NO REF. Sovl- 000

OTHER- 000

L 3611-66
ACC NR. AR5014359

SOURCE CODE: UR/0271/65/000/005/B042/B042

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.
Svodnyy tom, Abs. 5B312

2

B

AUTHOR: Shchedrov, N. I.; Mochalova, V. S.

TITLE: Simple counter element

CITED SOURCE: Sb. Ustroystva i elementy prom. telemekhan., Kiyev, 1964.

77-79

TOPIC TAGS: counter, digital counter, register

TRANSLATION: One trigger-circuit register cell includes two P13 transistors and a few resistors. The transistor T_1 collector is directly connected to the transistor T_2 base. The absence of a resistor in this circuit precludes using the T_1 collector potential because its value is limited by the potential of a low-

Card 1/2

UDC: 681.142.642.7

2

L 86II-66
ACC NR: AR5014359

resistance base-emitter circuit of the open T_2 . As the potential of the saturated-transistor collector, in a grounded-emitter amplifier, is somewhat lower than its base potential, and as the collector-emitter resistance is lower than that of the base-emitter, the trigger can be built without feedback-circuit resistors and without bias. Such a trigger is insensitive to negative pulses. A six-digit register designed with the above triggers was tested out at 0-15 kc; the register proved to be suitable for usage. Also, simplified trigger circuits are shown which can be used as contactless switches or storage devices (pulses of any polarity can be applied to the first inputs, only positive pulses can be applied to the second inputs). Figs. 2.

SUB CODE: 09

Card 2/2

JRM

Mochalova, V.V.

PAKHOMOVA, A.I., starshiy nauchnyy sotrudnik; KOCHALOVA, V.V., mладший
научный сотрудник

Use of cortisone and ACTH in keratoplasty. Oft.shur. 12 no.4:252-
256 '57. (MIRA 10:11)

1. Iz Ukrainskogo nauchno-issledovatel'skogo eksperimental'nogo
instituta glaznykh bolezney i tkanevoy terapii im. akad. V.P.
Filatova (direktor - prof. N.A.Puchkovskaya)
(CORNEA--TRANSPLANTATION) (CORTISONE) (ACTH)

RODIONOVA, K.F.; MOCHALOVA, Ye.M.; VOLODCHENKOVA, A.I.

Iron and certain carbonate minerals in the Devonian producing
formation as an indicator of its depositional conditions. Trudy
VNII no.20:162-185 '59. (MIRA 12:10)
(Shkapovo region (Bashkiria)--Geochemical prospecting))

RODIONOVA, K.F.; MOCHALOVA, Ye.M.

Base exchange in clay rocks of the Devonian producing formation
in Bashkiria and the Tatar A.S.S.R. as a possible indicator of
the salinity of Devonian basins. Trudy VNII no.23:114-142 '60.
(MIEA 13:11)

(Volga-Ural region--Clay)
(Volga-Ural region--Water, Underground)
(Salinity)

RODIONOVA, K.F.; STAROVYTOVA, A.F.; KIRIYENKOVA, N.V.; MAKAROCHKINA, K.M.;
Prinimali uchastiye: KOTOSHEVA, Z.S.; MOCHALOVA, Ye.M.

Characteristics of the organic substance in Jivet sediments of the
Pavlovskaya, Tashliyar, and Aktash areas in the Romashkino field.
Trudy VNII no.23:161-204 '60. (MIRA 13:11)
(Romashkino region--Sediments (Geology))
(Organic matter)

PETROVSKAYA, A.N.; VOLOVIKOVSKAYA, Ye.P.; VOLODCHENKOVA, A.I.;
MOCHALOVA, Ye.M.; KIRIYENKOVA, N.V.

Detailed correlation of cross sections of the mineralogical
complex of the clay part of rocks. Nauch.-tekhn, sbor po dob.
nefti no.13:31-33 '61. (MIRA 16:7)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.
(Tatar A.S.S.R.—Clay—Analysis)

MOCHALOVA, Ye.M.

Method of determining the composition of an absorption complex
of cations and the extent of cation exchange in argillites
and clay silts. Trudy VNII no.34:198-209 '62. (MIRA 15: 7)
(Tatar A.S.S.R.--Clay--Analysis)
(Ion exchange)

S/081/61/000/011/025/040
B103/B202

AUTHORS: Mushenko, D. V., Mochalovskaya, A. P.

TITLE: Catalytic cracking of distillates with increased nitrogen content

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 11. 1961, 480, abstract 11M170(11M170). ("Tr. Vses. n.-i. in-t neftekhim. protsessov", 1960, vyp. 3, 88 - 90)

TEXT: The authors present results of experiments with catalytic cracking of gas oils by means of hydrogenation in liquid phase of the Stolyarovskiy masut containing 1.8 - 2.0 wt % of nitrogen bases. Cracking at a standard and a coarse-pored catalyst at 450°C and a volume rate (VR) of 0.7, yields 22 - 23 %, at a VR of 1.5 the yield decreases to 15 - 16 %. The unsatisfactory results of the cracking of gas oils cannot be explained by the composition of their hydrocarbons but are apparently due to the poisoning of the catalyst by decomposition products of the nitrogen bases. After the removal of the nitrogen bases from the gas oil sample their cracking

Card 1/2

Catalytic cracking of distillates...

S/081/61/000/011/025/040
B103/B202

yielded 29.4 % gasoline at a VR = 0.7 and 25 2% at a VR = 1.5. A 50 % yield is achieved with a raw material containing bases at a VR = 0.51 and a raw material without bases at a VR = 0.68. Hence the removal of bases increases their capacity of being cracked 1.3 times. The benzine yield in this case is 1.2 times higher and the coke yield is 2/3 as compared to the bases containing raw material. 10 references. [Abstracter's note:
Complete translation.]

Card 2/2

MUSHENKO, D.V.; MOCHALOVSKAYA, A.P.

Contact coking and catalytic cracking of Stolyarova crude oil high
in sulfur and resins. Trudy VNIINeftekhim no.3:142-149 '60.
(MIRA 14:2)
(Petroleum as fuel)

S/065/61/000/012/001/005
E075/E135

AUTHORS: Mushenko, D.V., Levina, M.I., Tammik, M.E.,
Mochalovskaya, A.P., Semenova, V.V., and Zimina, A.V.

TITLE: Pilot-plant deresinification of crude oils by
contact process

PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.12, 1961,
1-7

TEXT: The contact process for deresinification of crude
oils developed by VNIINeftekhim in 1953-1955 was tested in a pilot
plant to obtain data for industrial planning. The plant consisted
of a heat-exchanger, capable of heating the oil to 430-450 °C and
70-30% vaporization, and a refractory brick-lined reactor suitable
for operation at temperatures up to 1000 °C. An improved iron-
containing contact catalyst was prepared for the experimental runs
in a catalyst factory, in the form of cylindrical pellets (5 mm²).
The reactor was charged consecutively with a 15 cm layer of
25 x 25 mm Raschig rings, 10 cm layer of 10 x 10 mm Raschig rings,
the first 125 cm-high layer of the contact catalyst, an

Card 1/4

Pilot-plant deresinification ...

S/065/61/000/012/001/005
E075/E135

intermediate 25 mm layer of Raschig rings and a second layer of the catalyst, followed by another layer of 25 mm Raschig rings. In all, 18 m³ of the catalyst were used. After deresinification the catalyst is blown with superheated steam to remove volatile products and then air for 12-15 hours. The regeneration process can be speeded up by increasing the amounts of steam and air passing through the catalyst. The results of the deresinification process and its material balance are given in Table 4. Of the deresinified oil 64% distilled below 350 °C, 93% below 500 °C and 97.6% below 530 °C. The experimental runs confirmed that the deresinification is a specific process for the removal of asphalts and resins, proceeding with a small thermal effect, and is not a modification of cracking. The gas formation is negligible and does not exceed 1%. After regeneration is finished it is not necessary to carry out spacious cooling of the reactor since the newly introduced feedstock rapidly makes its temperature uniform. The proposed process is recommended in the first place for high-sulphur crudes.

There are 2 figures, 5 tables and 4 Soviet-bloc references.

Card 2/ 42

MOCHALOVSKIY, A.N.

Increasing the natural resistance in animals. Agrobiologija
no.4:561-565 Jl-Ag '61.
(MIRA 14:7)

1. Checheno-Ingushskaya nauchno-issledovatel'skaya veterinarnaya
stantsiya, Groznyy.
(Veterinary physiology)

MOCHALOVSKII, A.N.; SHAPOCHNIKOVA, A.F.

Effect of parenteral administration of protein on the pathogenesis of tumors of the mammary gland in mice. Vop.onk. 7
no.3:72-75 '61. (MIRA 14:5)
(BREAST-TUMORS) (PROTEINS)

KOCHALOVSKIY, M.

Development of economic ties between city and country. Vop. ekon.
no.9:3-14 S '58. (MIRA 11:10)
(Agriculture--Economic aspects)

SEVER'YANOV, Nikolay Nikolsayevich, kand.tekhn.nauk. Prinimali uchastiye:
KUTMEVICH, M.A., inzh.; MOCHALOVSKY, N.G., inzh.. POLYAKOV,
N.K., nauchnyy red.; DOLMATOV, P.S., vedushchiy red.; YASHCHUR-
ZHINSKAYA, A.B., tekhn.red.

[Transportation in the fuel industry] Transport toplivnykh
predpriatii. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i
gorno-toplivnoi lit-ry, Leningr. otd-nie, 1959. 623 p.

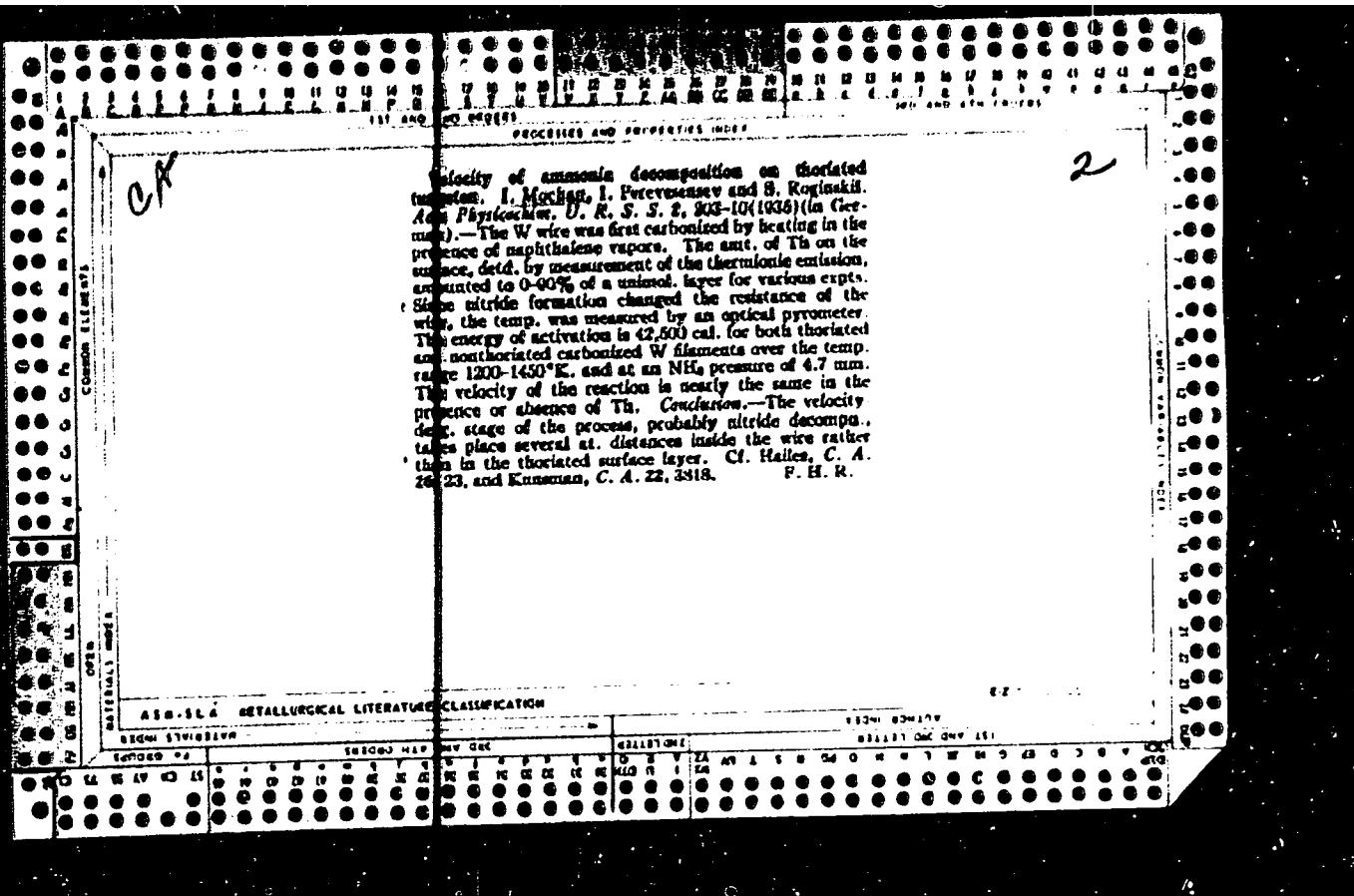
(MIRA 13:2)

(Railroads, Industrial) (Transportation, Automotive)
(Fuel--Transportation)

MOCHALOVSKIY, N.G., inzh.

Vertical planning of petroleum refineries. Prom. stroi. 48
[i.e. 41] no.6:49-50 Je '63. (MIRA 16:10)

Formation of ammonia by the impact of positive ions
I. Kondratenko, N. Kugelchik, V. Pechkov and A. Shekhter,
Chemist, Acad. Sci. (U.S.S.R.) 2, 605 (in German
167-9) (1934), cf. C. A. 28, 4254. - The effect of the ions
of the alkali metals on the synthesis of NH₃ was studied; the
crit. voltage required to initiate the reaction increases
with at. wt., as follows: Li, 26-28 v.; Na, 36-40 v.,
K, 60-65 v.; Cs, 120-128 v. The action of the pos.
ion is ascribed to the production of an active form of N, as
it is able to take up more energy than H, because of its
large mass. 2NH₃ were produced per ion, indicating that
both kinds of N react. B. R. Kondratenko



Chemical reaction in the electrical discharge. II.
Synthesis of ammonia by collision of positive ions. I.
MacLean, S., Roginskii, A., Shchukter and P. Theodorev.
Acta Physicochim. U. R. S. S. 6, 757-65 (1936) (in German);
cf. C. A. 29, 6513^a.—The effects of Li, Na, K,
Rb and Cs ions in a $N_2 + H_2$ mixt. at 10^{-4} - 10^{-3} mm.
pressure were studied. N_2 is selectively activated at 21
v. The probable mechanism is discussed and compared
with those of activation by electron collision and by elec-
discharge. L. W. Elder

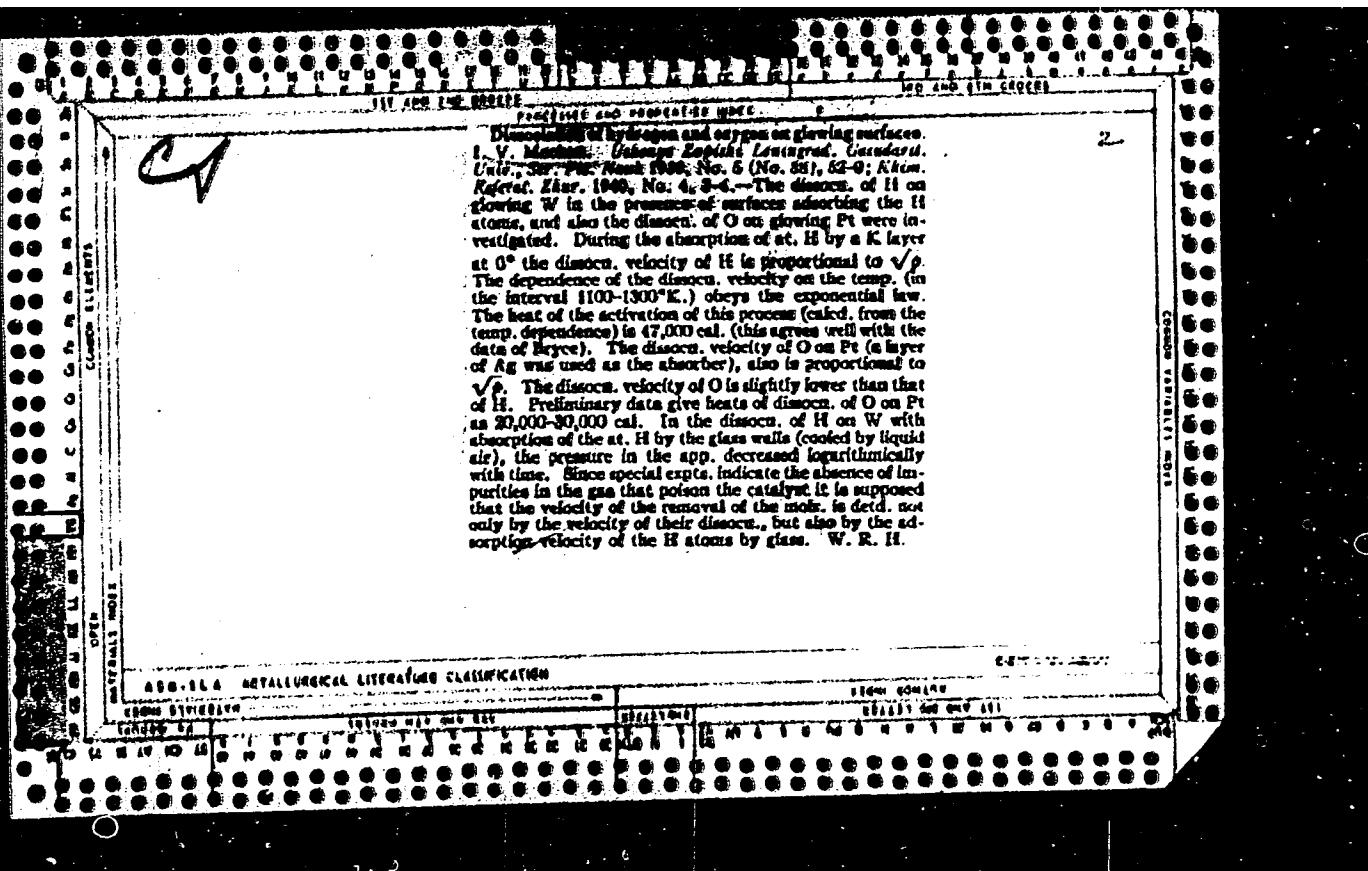
4
AIA 114 METALLURGICAL LITERATURE CLASSIFICATION

Effect of atomic hydrogen on synthesis of ammonia under positive-ion impact. A. GELBERT and I. MOCHAK (Acta Physicochim. U.R.S.S., 1937, 7, 707-717).—Using artificial spodumene samples as source of positive ions, the synthesis of NH_3 under positive-ion impact has been investigated. The absence of proportionality between the ionic current and the yield of NH_3 has been substantiated. With additional generation of at. H on a glowing W filament the reaction rate increases with the ionic current. The yield per ion in the latter case is independent of the ionic current, and lies between 0.1 and 0.3. This indicates that the synthesis of NH_3 depends on the presence of activated N and H atoms. Various possible mechanisms are considered; the reaction is believed to proceed on a cooled wall where an adsorbed layer of at. H is available.

W. R. A.

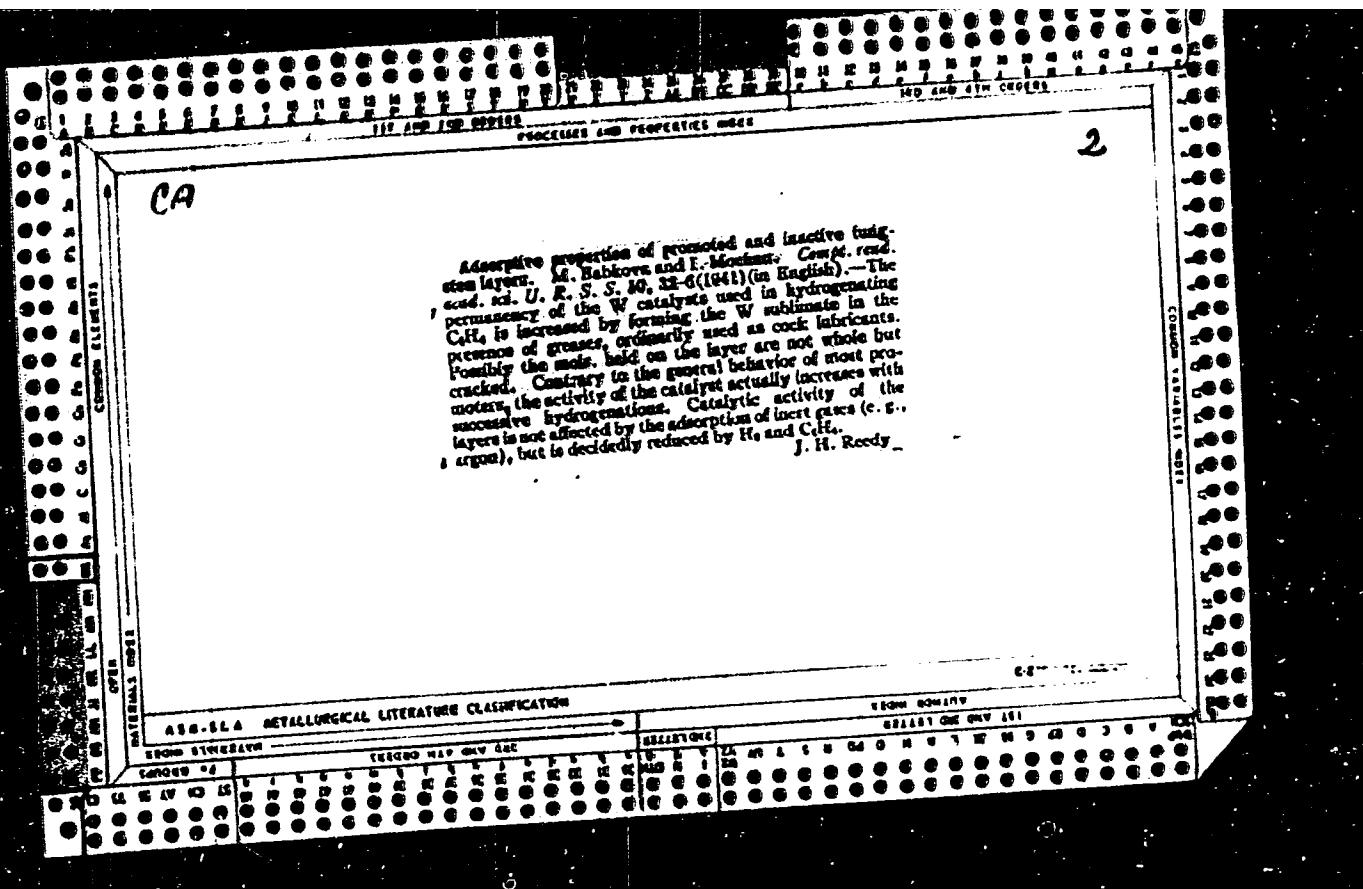
APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134820013-8"



MCHAN, I.

Promotion of tungsten by nitrogen and hydrogen. K. Zhdanovskaya,
V. Korolev and I. Mchan. Compt. rend. acad. sci. U.R.S.S. 30, 26-4
(1941)(in English).--The speed of the hydrogenation of C₂H₄ on W catalysts
reaches a sharp max. when the catalyst is promoted by 1 mol. of H₂ per
200 mols. of W or by 1 mol. of N₂ per 170 mols. of W. The catalytic
effect is not due to dispersion of the W, but to energy changes
brought about when the promoter is adsorbed. J. H. Heady



USSR/Chemistry - Conductivity, Electric Dec 48
Chemistry - Chemical Compounds,
Intermetallics.

"Electrical Conductivity of the System Zinc-Antimony," I. V. Mochan, Leningrad Physicotechnical Inst., Acad. Sci. USSR, 9 pp

"Zhur Tekh Fiz" Vol XVIII, No 12 - 1948-13

Conducted experiments to determine electrical conductivity and temperature coefficient of conductivity of Sb₂Zn from stoichiometric to point. Vehbinski's method was utilized for formation of zinc and antimony films. Mochan concludes that Sb₂Zn is a semiconductor.

19/49732
USSR/Chemistry - Conductivity, Electric Dec 48
(Contd)

but that its interatomic bonds do not correspond to those found in metals. Submitted 13 May 48.

19/49732

MOCHAN, I. V.

MOCCHAN, I. V.

USSR/Chemistry - Chemical Compounds, Intermetallic
Chemistry - Conductivity, Electric

Dec 48

"Photoconductivity of Some Intermetallic Compounds," V.P. Zhuze, I. V. Mochan,
S. M. Ryvkin, Leningrad Physicotech Inst, Acad Sci USSR, 4 pp

"Zhur Tekh Fiz" Vol XVIII, No 12 - pp.1494-47

Determined photoconductivity in intermetallic compounds of constant state AnSb and
Mg₃Sb₂. Gives measurements of spectral dispersion of photoconductivity and
conclusions on semiconductive nature of given compounds. Submitted 26 Jul 48.

PA 19/49T33

MOCHAN, I.

USSR/Chemistry - Tungsten, Thoriated
Chemistry - Dissociation of Hydrogen Apr 1948

"The Dissociation of Hydrogen on Pure and Thoriated
Tungsten," T. Ivanovskaya, I. Mochan, Physicochemical
Inst., Acad Sci USSR, Leningrad, 5 pp

"Zhur Fiz Khim" Vol XXII, No 4

Observe dissociation of molecular hydrogen on an
iridescent surface of pure and thoriated tungsten
at various temperatures and with various coatings
of thorium. Draw conclusion that dissociation
over thoriated tungsten occurs with greater energy
of activation. Show that the speed of dissociation

67M12

USSR/Chemistry - Tungsten, Thoriated
(Contd) Apr 1948

tion drops in accordance with increase in proportion
of the surface taken up by thorium. Submitted
1947.

67M12

Mochan, M. B. I. V.

USSR/Physics

Card 1/1 : Pub. 22 - 18/49

Author(s) : Mochan, M. B.

Title : Study of various contents of Mg and Sb films

Periodical : Dok. AN SSSR 98/4, 579-582, Oct. 1, 1954

Abstract : Experimental study of films containing various percentages of Mg and Sb (magnesium and antimony) is described. The experiments were intended to determine a relationship between the electrical and photoconductivity, and transparency on the one hand, and the chemical and quantitative content of the films on the other. Seven references (1948-1954). Graphs.

Institution : Laboratory of Semi-conductors of the Acad. of Scs. of the USSR

Presented by : Academician A. F. Ioffe, April 29, 1954

Mochan, I. V.
USSR/Physics - Conductors

FD-3106

Card 1/1 Pub. 153 - 5/24

Author : Mochan, I. V.

Title : Experimental investigation of transverse Nernst-Ettinghausen effect
in tellurium

Periodical : Zhur. tekhn. fiz., 25, No 6 (June), 1955, 1003-1012

Abstract : The author measures the Nernst and Hall effects in tellurium. He
discovers on the curve for the Nernst constant Q a maximum at
temperature 350°K. He explains the maximum taking into account the
phenomenon of carriers of second sign. He compares the experimental
data with theoretical curves of Yu. N. Obraztsov (ibid., 25, No 6
(June), 1955, 995-1002; see preceding abstract) which take into
account scattering on admixture (impurity) ions. Agreement of
theory with experiment is shown to be fair. He thanks student T.
Krylova, who participated in the measurements, and also Professor
A. I. Ansel'm and Yu. N. Obraztsov for help in comparison of theory
with experimental data. Nine references: e.g. L. S. Stil'bans,
ibid, 22, 77, 1952; T. Fukuroi, S. Tanuma, S. Tobsawa, Sci. Rep. Res.
Inst. Tohoku Univ., A1, 373, 1949.

Institution :

Submitted : January 28, 1955

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134820013-8

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134820013-8"

AUTHOR: MOCHAN, I. V., OBRATZSOV, JU. N., KRYLOVA, T. V., PA - 2119

TITLE: The Investigation of thermomagnetic effects in hole-germanium.
(Issledovaniye termomagnitnykh effektov u dyrochnogo germaniya
Russian).

PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol 27, Nr 2, pp 242 - 259 (U.S.S.R.)
Received: 3 / 1957 Reviewed: 4 / 1957

ABSTRACT: The longitudinal and transverse effects of Nernst-Ettinghausen and the Hall effect in Hall germanium (p-germanium) were investigated within the domain of admixture conductivity. Investigations were based on the general assumption of the arbitrary dependence of the relaxation times $\tau^{(2)}$ and $\tau^{(1)}$ and the heavy holes of the energy ϵ , while all other assumptions made by the paper of Willardson-Harman-Beer, Phys. Rev., 96, 1512, 1954 were retained. The equations for Hall's constant $R(H)$, for the constant of the transverse effect of Nernst-Ettinghausen $Q(H)$ and for the modification of the thermoelectromotoric force α on the magnetic transverse field $\Delta\alpha = \alpha(H) - \alpha(C)$ are set up. According to the formulae derived curves are computed and attached. The relation of the concentration $u \sim T^{-2.5}$ which is a near approach to the experiments, is obtained on the assumption that $\tilde{\tau} \sim \frac{1}{T^{2.2}}$. The criteria then derived show that, if the last mentioned formula is correct, the dependence of galvanometric and thermomagnetic effects on the magnetic field should occur in the case of much weaker fields

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The Investigation of thermomagnetic effects in hole-germanium. PA - 2119
then would follow from the ordinary criterium. Experiments were carried out on a sample of p-germanium the specific resistance of which amounted to 69 ohm.cm at room temperature. All measurements were carried out according to the compensation method. The next chapter enumerates and discusses measuring results. The corresponding curves are attached.

Measuring of the thermomagnetic transversal effect of Nernst-Ettinghausen in hole-germanium of high frequency showed a considerable dependence of the Nernst constant on the magnetic field in the interval of temperatures of admixture conductivity of from 80 to 240°K in fields of up to 5000 gauss. In dependence on the field the effect changes its sign at the field value of H_0 (i.e. the value at which $Q(H)$ becomes zero in the case of every temperature). The quantity $\frac{1}{H_0}$ changes with temperature proportionally to $T^{-2.3}$, i.e. this change is proportional to the mobility u_1 of the heavy holes as is predicted by theory. The measured dependence of Q on temperature and H on the magnetic field can be expressed as follows: $Q = T^{-4} f \left(\frac{u_1 H}{c} \right)$, where f , at a given value $\frac{u_1 H}{c}$, is independent of temperature.

Card 2/3

PA - 2119

The Investigation of thermomagnetic effects in hole-germanium.
(H is the voltage of the magnetic field, c the velocity of light). The character of the dependence obtained can be theoretically derived on the assumption that in the temperature interval given the transversal effect by Nernst-Ettinghausen is determined entirely by the process of hole capture by phonons. As measurements have shown, capture by phonons exercises no influence on the amount of the change of thermoelectromotoric force in the magnetic field in the case of weak magnetic fields. In the case of stronger magnetic fields part of the change of thermoelectromotoric force in the magnetic field (determined by the capture effect) is comparable with that part which is determined by the ordinary process. The quantities of mobilities obtained from the inclination of the tangents at the curves of the dependence of $\Delta\alpha$ on H^2 at the point $H = 0$ are, according to their absolute value, near Hall's mobilities and change with temperature (proportional to $T^{-2.5}$). The absolute values of mobilities agree with the values of drift mobility which were mentioned in the paper by Prince, Phys.Rev., 91, 208, 1953. (15 illustrations).

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ASSOCIATION: Institute for Semiconductors of the Academy of Science of the
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AUTHORS: Mochan, I. V., Smirnova, T. V.

SOV/181-1-7-14/21

TITLE: On the Method of Measurement of the Nernst Effect

PERIODICAL: Fizika tverdogo tela, 1959, Vol 1, Nr 7, pp 1112-1114 (USSR)

ABSTRACT: As found for hole-type germanium in reference 1 the relation between the Nernst constant Q, the field strength H and the temperature T for $\frac{1}{H_0} \sim u \sim T^{-2.3}$ (u = mobility) is also valid in p-germanium. The change of $\frac{1}{H_0}$ as a function of temperature depends mainly on the type of contact between the germanium sample and the measuring wires. H_0 = field strength for $Q = 0$. Due to the present investigation it may be concluded that the said effect ($\frac{1}{H_0} \sim T^{-2.3}$) may be explained by a Hall effect caused by currents circulating near the electrodes. These currents cause additional potential differences, if the Nernst potential differences are measured. 2 thin copper wires and 2

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thermocouples (copper-constantan) were used for measurement, a tin drop serving to fasten the wires to the germanium sample. The production technique of electrodes is commonly known. As shown by controlling measurements no change in volume of the the sample occurred after annealing the electrodes (30 min, 400 - 450°C) in vacuum. As found by experiments the observed effect (additional positive potential difference) is positive in all cases, also when using a hole-type germanium sample. The effect is found to decrease quickly if the diameter of the tin drop is diminished. The theoretical computation of this additional effect with respect to its size was tried by Yu. N. Obraztsov. To avoid the temperature gradient in the drop the shape of a cross was given to the germanium sample, the electrodes being fixed at the front side of the longer beam. Comparing the results obtained for both kinds of samples and subtracting the additionally observed effects it is noticed that the course of $\frac{1}{H_0}$ as a function of temperature may only be ex-

plained by the specially small area of contact between sonde and germanium. The observed dependence is not influenced by

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fastening the electrodes by indium contacts or without tin drop (copper or platinum electrodes). The measuring results are graphically represented. The work was shared by L. S. Stil'bans and B. Ya. Mozhes. There are 3 figures and 1 Soviet reference.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors of the AS USSR, Leningrad) ✓

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SOV/181-1-9-4/31

AUTHORS: Mochan, I. V., Obraztsov, Yu. N., Smirnova, T. V.

TITLE: Investigation of Interaction of Holes in p-Germanium with
Vibrations of the Acoustic Branch

PERIODICAL: Fizika tverdogo tela, 1959, Vol 1, Nr 9, pp 1351 - 1359 (USSR)

ABSTRACT: The authors investigated the temperature dependence of the phonon part of the thermo-emf α_{ph} and its change in the magnetic field α_{ph} in germanium. $\alpha_{ph} \sim \frac{\tau_{ph}}{\bar{\tau}'T}$, where τ_{ph} denotes the averaged free-path time of the phonons interacting with electrons, and $\bar{\tau}'$ that of the electrons. As is shown, the investigation of these effects makes it possible to determine the mean free time of the holes τ'_e , corresponding to single-phonon scattering on longitudinal sound vibrations. The experimental setup used for the measurements is discussed on the basis of figure 1. The p-type samples investigated were cut off from one single crystal in the following manner:

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Investigation of Interaction of Holes in p-Germanium SOV/181-1-9-4/31
With Vibrations of the Acoustic Branch

1) $[100] \parallel \nabla T$, $[011] \parallel \vec{H}$; 2) $[011] \parallel \nabla T$, $[100] \parallel \vec{H}$; 3) $[110] \parallel \nabla T$,
 $[111] \parallel \vec{H}$; 4) $[111] \parallel \nabla T$, $[211] \parallel \nabla H$. The n-type sample
investigated for comparative purposes was measured in parallel
to the temperature gradient which included an angle of 15° with
the $[110]$ direction. A measurement of the Hall effect yielded
equal carrier concentration for all p-type samples ($4 \cdot 10^{13} \text{ cm}^{-3}$),
for n-Ge $0.9 \cdot 10^{13} \text{ cm}^{-3}$. Figures 2 and 3 illustrate the deter-
mination results of the temperature dependence of the thermo-
emf. Figure 2 shows $\alpha_{ph}(T)$ for p- and n-Ge, figure 3 $\Delta\alpha(T)$ for
p-Ge (hyperbolas). From figure 2 it follows $\alpha_{ph} \sim T^{-2.2}$ for
p- and n-Ge, in which case (4) is obtained in general:
$$\frac{\tau_e^{\text{ph}}}{\tau_e^{\prime T}} \sim T^{-n}$$
. The investigation results of the longitudinal
thermomagnetic effect at 200 - 5000 oe are given in 3 diagrams
and 1 table. As may be observed from the table, in formula (4)
the mean error in n is about 10%. The connection between $\tau_e^{\prime T}$ \downarrow

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and T is near the $\tau_e \sim T^{-3/2}$ required by theory. Consequently, the experimentally observed dependence of the hole mobility in p-germanium can be explained only by assuming some other scattering mechanism to play the principal part, apart from the considered scattering on acoustic vibrations. There might be, for example, scatterings on optical vibrations. There are 6 figures, 1 table, and 20 references, 6 of which are Soviet.

ASSOCIATION: Institut poluprovodnikov AN SSSR Leningrad (Institute of Semiconductors of the AS USSR, Leningrad)

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Mochan, T. V.

S/181/60/002/05/08/041
B008/B058

AUTHORS: Obraztsov, Yu. N., Mochan, I. V., Smirnova, T. V.

TITLE: The Phononic Transverse Thermomagnetic Nernst Effect
p-Type Germanium

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 5, pp. 830-835

TEXT: The dependence of the phononic part Q_{ph} of the Nernst constant on the magnetic field strength was numerically computed for p-type germanium with regard to the transitions between the bands of light and heavy holes. Further, the authors considered the dependence of the mean free time of the holes τ_{ph} on the wave vector q . These results are compared with the data obtained by the authors for p-type germanium in the temperature range 96-143°K and magnetic fields of up to 5,500 gauss. The curve computed from equation (3) for the ratio between the concentrations of light and heavy holes is shown in Fig. 1, and the dependence of the Nernst constant Q on the magnetic field was measured for comparison (Fig. 3). The effect of contacts on the Nernst voltage measured was eliminated by the use of

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The Phononic Transverse Thermomagnetic
Nernst Effect in p-Type Germanium

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cruciform samples (Fig. 2). The relevant curves recorded in the temperature range 96-143°K are shown in Fig. 3. The authors thank A. I. Ansel'm and G. Ye. Pikus for discussing the paper and reading the manuscript. There are 3 figures and 15 references: 6 Soviet, 2 German, and 7 English.

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